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SOME EXPERIENCES WITH YELLOW FEVER AND ITS PREVENTION.

MAY 1st, 1862, the United States forces were in full possession of New Orleans. The Commanding General had issued his proclamation, the terms of which have become history.

On the first of June, 1862, New Orleans was re-opened as a port of entry of the United States, and became a city of large commerce from the sea, and south of Vicksburg, where the river was closed from the North.

Before the reader can comprehend the exact circumstances in regard to the yellow fever in New Orleans, which are now for the first time to be detailed at length, a succinct description of that place and its surroundings must be given :

The city lies, in its populated part, along a sharp bend of the Mississippi River, on the eastern bank, for some six or seven miles, between Chalmette to the south, where Jackson opposed the forces of the British, and Carrollton on the north. The river is shut out from the city along its whole length by an embankment which has been the growth of many years, more than a century since its settlement, called a "levee." Standing in the streets of the city, in time of high water, you look upwards to the ships in the river, borne up by the waters some thirty feet above your head. In low water the river falls some fifty feet, but still remains at the very great depth of three to five hundred feet.

No stream, sewer, conduit or other opening enters into the river from the City. At or near Carrollton, up river, cross embankments or "levees" shut out the waters from the city in time of high water, and extend over the swamps surrounding Lake Pontchartrain, which is a lake of some forty by twenty-four miles, more or less, lying west of the city, and communicating with the

gulf with certain straits called the "Rigolets." On the south a similar but lighter levee prevents the encroachment of the Mississippi upon the city.

On the north, some three or four miles below Carondelet, a canal leads from a point about eighty rods east of the river back to the lake, and is filled by the waters of the lake, which in times of high water are some twenty feet, more or less, below the river. That canal was built by Hon. Simon Cameron, of Pennsylvania, some sixteen years before the war of the Rebellion, and afforded navigation from a basin at its head to the lake, but in no way communicating with the river. Below that was the Bayou (gut) St. John, a natural water-course from a basin near the centre of the city to the lake. It had in early times been dug out and straightened, and was called the "old canal," and was navigable in an inferior degree to the new canal. Still below that was the Bayou Bienville, which also afforded water communication with the city, from Lake Pontchartrain and its branch, Lake Borgne, in the same manner as the old canal, except that it was a natural stream.

The lake was four miles, more or less, from the river ; was filled by water partially freshened, coming from the gulf, and was affected more or less by the tides, but never above a couple of feet. Indeed, the waters of Lake Pontchartrain were very considerably more affected by the wind than the tide. A heavy "norther," or north wind, continued a day or more would blow the water of the lakes out through the Rigolets into the Gulf so as to lower the height of the surface in the lake a foot and a half to two feet ; a strong south wind would stop the exodus of the waters and drive them back to the ordinary tide level, or perhaps six inches more.

There were no such structures as sewers, or underground drains in New Orleans. All the drains were surface water courses, or ditches, whose office it was to carry away the surface water of the city from the rains, into the bayous and canals and thence into the lake. It will be seen at once that New Orleans could be very easily kept clean from the miasmatic gases which affect other cities which are drained by sewers, and arise therefrom, because these drains or ditches being on the surface are perfectly approachable, open to the fresh air, and could be thoroughly dredged, cleaned and washed out.

The reader must take with him two other facts: There were no cemeteries in New Orleans in the sense that they are generally understood; that is, places for the burial of corpses under ground. There were large numbers of structures above ground in which were vaults of brick, and in some cases stone, in which coffins could be placed as in an oven, with iron doors to close them, and in some cases they were bricked up.

Again, there were no vaults under ground for the deposition of excrementitious matter. That was disposed of in another form which it is not necessary to describe, but not in a cleanly manner.

The city was surrounded by swamps, except on the river side, in which there were enormous growths of vegetation yearly, which was not in any way consumed or removed, which vegetation showed itself as early as January, and, of course, in a large degree ceased its growth in the June, July and August following, and began a decay of the most rapid kind.

New Orleans itself had been built upon what might not be inaptly termed an immense raft of trees, timber and shrubbery knit together by vines and branches, weighted down and pressed together in the earlier days by the silt which came in from the river, which then overflowed its banks, the whole being bound together by the fibres of the enormous vegetable growth before spoken of.

When a building is to be built in New Orleans no foundation is laid; the surface of the ground is made smooth and level, and on that is placed a cypress plank, and on that begins the building of the brick wall of a building of more or less height.

The United States Custom House, which is a very large building of granite, inclosing acres, was built on an immense raft of live oak, floated upon this under raft upon which the city is built. It had settled down nearly six feet when the events happened that are herein narrated, and was still settling.

It has been told, and believed to be true, that in New Orleans one can drive a pile down some sixteen feet and find the usual resistance which in soft ground would be found to such forcing down of a stick of timber, but that afterwards the bottom of the pile finds itself in water, and that it may be driven to any depth without further resistance, another pile being placed upon the top of that one, and so driven indefinitely. Indeed, in endeavoring

to stop a break of the river in the bank or levee which has been spoken of shortly above the city, it was thought advisable to sink a ship so as to fill the opening and give opportunity to build against the river, supported by the hull. The ship was put in position to sink, and it did sink until its top-gallant masts were no longer to be seen or felt, and that ship has never been seen or heard of since, except possibly by the inhabitants of the corresponding latitude and longitude on the other side of the world.

The high temperatures of summer came on soon after the landing of the troops, but at this time there was no considerable malaria from decaying vegetable matter, for everything uncovered was vigorously growing. It is true in the environs largely, and in the city itself to a smaller extent, malarial exhalations which bring on the congestive fever popularly known as "fever and ague," or the "shakes," for which the cinchona bark of Peru, in the form of quinine, is claimed to be a specific, find place in New Orleans throughout the year. The cause of it, decaying vegetable matter under specific forms, is quite universal, and entirely irradicable. This cause of the disease is everywhere in that vicinage, but of course much more active and troublesome to the health of the city in the warmer months.

Our troops soon learned that the inhabitants of New Orleans and the people of the South as well, relied with great confidence, as an element to conquer our armies, upon the coming of the yellow fever season, which was expected to make its advent and devastations from the middle of June onward and remain until frost became the eradicator. Our army was very much exposed to it. We had Maine, Vermont, Massachusetts and Wisconsin troops, and all were northern men, and the most southern were from Indiana.

The pleasing hope of this assistance to the "cause now lost" was by no means concealed from us. We were full-blooded, fresh-lipped men, as entirely unacclimated to that or kindred disease as could possibly be found. It was assumed that fright at its ravages and dread of its dire effects would be the great promoter of the dread disease, and so we were treated with the most vivid tales of its deadly ravages, its incurable hold upon northern men, and the fact that in 1853 yellow fever had so swept the city that it was impossible to bury the dead even in the oven-like brick holes which we saw, and from which we shrank,

the city then being without any Northern troops to fill high the funeral pyres, could only get rid of its dead by cremation.

We were shown the awesome statistics, that in 1853, beginning on the 1st of August, with one hundred and six deaths by yellow fever, and one hundred and forty-two, including all diseases, the number increased daily until for the first week, ending on the 7th, there were nine hundred and nine deaths by yellow fever and one thousand one hundred and eighty-six by all diseases ; that the next week showed a continued increase to one thousand two hundred and eighty-eight deaths of yellow fever, and one thousand five hundred and twenty-six of all diseases ; that the next week was one of still greater fatality, the total deaths from yellow fever being one thousand three hundred and forty-six, and of all diseases one thousand five hundred and seventy-five, and that on a single day, August 22d, the deaths from yellow fever were two hundred and thirty-nine, and of all diseases, two hundred and eighty-three. Thus the month of August exhibited a grand total of five thousand one hundred and twenty-two deaths by yellow fever and seven thousand deaths of all diseases.

We were also told that these figures by no means showed the ravages of that fell disease ; that there were many thousands carried away from the city sick, who died, and many thousands whose deaths were not returned for record. Indeed, it was summed up in this way : “That only the unacclimated were liable to the disease, and that must exclude the old acclimated population, which, with the slave and free colored persons embraced at least two-thirds of the summer population of New Orleans—that this would reduce the number liable to yellow fever below thirty thousand, and of that number one-fourth had died in three months.

We were the unacclimated.

This was the story told to the Commanding General. The solitary sentinel got the story of the danger in a different way, as in the early hours of night he paced his lonely beat guarding some public building, a stench arising from the dirty streets almost nauseating him ; and if he asked a passer by “what is the matter that such a smell should be here,” if an acclimated person he would reply, “why, what is the matter ? It is always so.” And thus marching his thoughts would stray home to the healthy air of his native village. Two newsboys would hang on to the lamp-posts and apparently carelessly, but purposely, call to each other in the man’s

hearing, in language like this: "Jimmy, have you heard the news?" "No; what is it?" "They have got the 'yeller' fever down in Frenchtown prime; eleven have died to-day, there, and its spreading. The Yanks will catch it awful. I shall be glad, won't you, when they either die off or run away in their ships?"

It was said that the acclimated people prayed that the fever might come. I never could quite believe that; but there are many things that render it almost probable. They appeared to me to devote themselves to a condition of perfect nastiness which must bring on yellow fever. If they prayed for the fever at all, they didn't do it aloud in their churches, because our soldiers used to go to church; yet, in the course of the liturgy the clergyman always gave out, at a certain point, that there would now be given an opportunity for silent prayer, and then the people either prayed for the yellow fever, or Jefferson Davis to come there victorious; neither of which was comforting to the Yankee worshiper, when in silent prayer.

May 10th, the streets were reeking with putrifying filth, and the smells from the decomposing matter were, to a Northern nose, unbearable. Everything had of custom been thrown into the streets that the inhabitants desired to be rid of, and lay there seething and rotting. The canals and all their tributaries, the drains, were covered with green slime so thickly that the water was not visible. In the pools were dead animals floating about, with every other description of animal decomposition.

The superintendent of streets and canals was sent for; his attention called to this condition of things, and he was asked if he could apply any remedy. He insisted that there was nothing unusual, and he didn't know of anything that could be done or why anything should be done, and he had been there a great many years.

The disease would soon be upon us. It came before the end of May in 1853, and was supposed when once there to be irradicable.

The General in command was in the very unfortunate predicament of not having a single surgeon in his army who had ever seen a case of yellow fever. He immediately applied to Washington to send him one; but to get such detail through the usual course would take, and did take, many weeks.

The General's time and attention, in addition to all other duties, were very much taken up by the multiplied and continued

application of his officers to be allowed to resign and go home, to do which there was very great temptation, independently of a wish to avoid this awful disease, believed to be surely and steadily approaching, from which men shrunk with trembling who, with a gleeful smile, would have marched up to a cannon's mouth upon the simplest order.

New regiments were forming in all Northern States by hundreds, in which the officers who had formed a part of the "Army of the Gulf," which occupied New Orleans, and whose glories were being made the subject of song and story in the North, would, if they were at home, find instant appointment and promotion. Regimental surgeons' certificates of ill health of officers almost rained upon the General. A surgeon with his belief in the probable ravages of the yellow fever could truthfully certify that in his judgment the applicant for resignation would not live more than sixty days if he remained in that climate; and, as the officer, eager to go home and get promotion, could not be spared, the General had nothing to do but to assure him that the necessities of the service required the General to try the experiment whether he would live sixty days, and that if the officer died the General would apologize to the surgeon for doubting his medical skill.

There was one man who could not go home. He must perform the duties which devolved upon him, and those were to save his army.

The first thing to be done was to prevent the importation of the disease. Quarantine grounds were upon the river some seventy miles below the city. Just below them were the forts St. Philip and Jackson, by which Farragut had run, now occupied by our troops, which controlled the river. Who shall be placed at the quarantine to see that no contaminated vessel shall come up? No loyal man could be had with the requisite knowledge. Besides, vessels with heavy cargoes had sailed for New Orleans, some with perishable goods to be spoiled or made unsalable by forty days detention, and thousands of dollars would be given for a permit to come up. Such permit, therefore, must come from the Commanding General only, as the safety of all depended upon the steadfastness with which this safeguard against this disease was held.

A doctor was sent for who had been candidate for quarantine physician the year before, but failed of election. Men spoke

highly of him as learned in this specialty, and an upright fearless man, though a rebel. A conversation substantially like this ensued :

“ Doctor, you were candidate for quarantine physician ?”

“ Yes, General.”

“ Did you believe yourself fully qualified for that position ?”

“ I would not have sought the place otherwise. I was here in ’53.”

“ What is the annual salary ?”

The sum was named.

“ Very well ; you will not be needed except from the 1st of June to the 1st of December. If you serve you will have the salary for a year for so doing. Will you serve ?”

“ I will.”

“ But, Doctor, you are a stranger to me, and against your country’s cause. How shall the General know that you will serve faithfully ? Suppose we have this understood between us : You shall search all vessels in regard to their cleanliness and freedom from disease, and you shall report the facts as you find them to the General by telegraph. No ship shall come up without his order by telegraph. If you report the facts truly, the General shall be responsible if an infected ship is let up. If you report the facts wrongfully, and the yellow fever comes up in a vessel, for that the General will hold you responsible, and punish bad faith under that responsibility with death as soon as the facts can be found. Will you take the place ?”

“ I am not afraid, General.”

“ It is then understood. You shall have all the assistance you desire.” And but one case of yellow fever ever did come to New Orleans during that doctor’s inspection, and for that not the slightest blame attached to him.

The fever may be generated, and if not generated the seeds or germs, or, as it is now fashionable to call them, the “ microbes,” that is, the “ littlenesses ” (?) of yellow fever, as I understand that word, may be preserved, carefully done up in clothing or woollens from the effects of frost, and break out, if a congenial and fructifying atmosphere is found in which the “ microbes ” may plant themselves.

The General had read as carefully as might be every account that had been written of the fever of 1853. He had examined

the map carefully as to where it had broken out and in what direction it had extended its ravages. He learned that it had always broken out and raged in the worst form and most virulently, around the French market. It was assumed that some cause could be discovered for this fact. He made a personal examination of the market, and did find what appeared a most efficient cause for the disease. Indeed, no reason could be seen why the yellow fever should not remain there in permanence save when killed by frost, assuming that his theorization upon the causes for and feeding of the yellow fever was correct.

The General had never heard of the yellow fever in the East; had heard of the plague, of cholera and leprosy as terrible scourges. While this country was substantially exempt from them, why should we be cursed with the other? He had not within reach, if there are any such, any works to enlighten him upon this topic.

He knew of one, and everybody else knew of the same one, the Bible, but which he had not heard quoted as a work on diseases; in that were the books of Moses. Now, without discussing the question whether Moses was taught directly of God as to the writing of his books and his instructions to the Israelites, as wholly one side of this examination, it is certain that Moses had "all the learning of the Egyptians," which included all the learning of that time in the world, upon dealing with the diseases incident to large bodies of men gathered together in a hot climate.

The General had before read with admiration Moses careful provisions in regard to leprosy and against the plague, and also as to preserving the bodies of his people free from corruptions and unhealthiness, and enforcing them even, with the belief on the people's part that he could invoke divine power to enforce his provisions.

The General observed that while Moses seemed to take no care as to diseases which might arise from the miasma from decaying vegetable matter, and while nothing is said of that peculiar fever which we know coming to us from such matter, yet that Moses enforced the most thorough, careful and minute cleanliness in regard to all dead or decaying animal matter, of every description, of which he used very large quantities.

The altars blazed with continual fires, upon which were placed as expiation for all offences, descending even to trespass, parts

of animals large and small, from the bullock to the turtle dove, of which the fires consumed upon the altar very small portions, and other not very large portions were devoted to the sustenance of Aaron and the sons of the priesthood. Moses, over and over and over again, requires every day that the carcass, the offal, the dung and refuse parts of all animals sacrificed be carried without the camp and there burned up, and the ashes even buried.* And the same imperative orders were given in regard to every part of the animal that was not burned on the altar or eaten as food by the children of Aaron.

And it is wonderful to observe the most stringent orders for the most unremitting care that every possible part of, or excrementitious matter from the human body should be day by day carefully buried, and every Israelite was armed with an implement for that purpose.†

Not only this, but every exhalation from a dead body of any sort was treated as “uncleanness,” and whoever touched anything dead, or had any dead matter issue from himself partaking of blood, should wash himself with water, and thereafter not “come into camp till even.”

So much and so great care was taken that not a microbe of putrifying flesh, and especially human flesh, should taint the pure air of Palestine, or even the wilderness.‡

So Moses had neither typhus fever, cholera nor plagues not inflicted by the Lord for punishment among the children of Israel during a forty years' march. By feeding his people substantially upon manna, a purely vegetable product, the leprosy was gradually worked out of them. That he had no diseases from decaying vegetable matter might be accounted for by the fact that while he was wandering in the wilderness there was not then, any more than there is now, any considerable vegetable growth except in the shape of trees,—nothing like the jungle of the Louisiana swamps.

Again the General had observed that in locations in our own country where “the chills and fever” were very prevalent, attacking almost every man, woman and child in the Western and

* Leviticus, Chapter 4, verses 12-20. These orders are repeated over and over again in the Book of Numbers.

† Deuteronomy, Chapter 23, verses 10, 11, 12, 13.

‡ Vide Deuteronomy and Numbers *passim*.

Southern wilds, yet in such places there was no indigenous yellow fever, or any, save when transported there. He observed also that where there was no decaying vegetable matter, emanations from decaying animal matter, and more especially the excrementitious matter from the human body, even exhalations only when confined so as to be inhaled by living people produce typhus or "ship fever." He therefore deduced from these considerations the belief that the yellow fever would not be engendered in any locality where there was decaying vegetable matter alone, or where there was decaying animal matter alone, but that it required an atmosphere which contained the seeds of disease which cause the congestive fever, and, at the same time the seeds of disease which cause the typhoid fever; and that the causes of these two diseases thus united result in the yellow fever; or, more carefully speaking, produce an atmosphere in which fever may be propagated and flourish if once any seeds of it were introduced. He doubted, then, that an atmosphere could be so tainted with germs of typhoid fever and germs of congestive fever, as to generate yellow fever; but a single germ of yellow fever being introduced into such an atmosphere, wherein human beings are breathing and living, will cause the spread of yellow fever with an activity and intensity, as the germs which produce these two diseases more or less permeate the atmosphere.

To illustrate so that he may not be misunderstood: A gardener desires to raise mushrooms. He may make a bed of pure Savannah mold mixed with pure ox-dung, but no mushroom will spring up from any seed placed in that bed. He may make another bed of like pure mold and horse-dung, but no mushroom will spring from that bed. But let him make another bed wherein he shall mix his mold with horse and ox-dung combined, and under proper circumstances as to light and heat, the same as in each of the other cases, and from the slightest impregnation of the bed at one corner thereof, if you please, with "mushroom spawn," which is so intangible that it cannot be discerned in the mold which encases it, to be even a microbe, and twenty-four hours will gladden the gardener's eyes with a plentiful crop of mushrooms springing up all over the bed, and for weeks continuing so to do.

Why mushrooms will not flourish unless the bed is made of the two kinds of manure is not yet known. Why yellow fever will

not flourish in an atmosphere unless these two sources of the disease, congestive and typhus fever, form a climate for it, is not known, nor has the General ever seen any statement why it will not ; but he thinks he knows from experience that it will not.

What, then, was to be done? It was impossible to clean the city of rotting vegetable mold, but it was believed possible to clean the city from all deleterious emanations of animal matter.

The General, therefore, employed eleven hundred men, who were hired at a dollar a day, to be paid out of the city treasury, for the purpose of cleaning the city at once. The City Council had not then been abolished, and thereupon they passed a resolution that the General was paying the laborers too little. This was at once acceded to, and the laborers were paid a dollar and a half a day. As citizens were to foot the bills, it was thought they might fix the price.

A part of the cleansing force was sent to the French market, which dug and scraped that all over, cleaned and removed the filth and sent it down the river.

We went through every street where there was any suspicion of animal matter. We hoed out, swept out and brushed out every drain and ditch in the city, and took advantage of the rains of the early summer, which came down in drenching showers, to drive all this filth into the basins and canals. We then waited for a favorable opportunity, when a norther had blown the water out from the lake some two feet deep through the Rigolets into the Gulf, and then we put the water-works of the city pumping and running at their full capacity, while we brushed down the banks of the canals, and sent the water, with the accumulated filth, out into the lake, where it was carried by the wind miles off into the Gulf. We then waited for a south wind to blow uncontaminated salt water back into the lake and fill it up again, and then that water filled the canals. We did that twice over, until the water in the canals was as clean and clear as any body of water.

Meanwhile the most stringent orders were issued to the people of New Orleans that nothing should be thrown into the streets, open spaces or alleys ; that either a box or a barrel or some such convenience should be obtained by every family occupant of a tenement, into which everything of offal, animal or vegetable, and every other waste thing should be put and exposed at the

area gate three times every week, when mule teams would come by and take up the barrels or other receptacles and pour their contents into a cart, and if that left the barrel clean and sweet, well ; if not, a quantity of chloride of lime would be placed in it by which it might be purified.

Besides that, an order also went forth that every household should clean up its areas and back yards, to the acceptance of an inspector detailed from Headquarters, and once in ten days at least, and sometimes oftener, the yards were all inspected. And the most careful and stringent efforts were made to see that nothing of human or other animal excrementitious matter should exist in the city, except under such circumstances as would make it thoroughly harmless.

True, we had to put one man in the guard house for throwing some paper into the street, he insisting that he was to judge whether it would do any harm or not to disobey the order and throw it there; and we had also to put one fashionable lady in a carriage to take her to the jail because she refused to clean up her place, saying that "she should not clean her premises at the order of any Yankee officer;" but at the sight of the jail she changed her mind and was clean and healthy afterwards.

The result was that while we had at the quarantine station below in the river the yellow fever raging in vessels which came there, but were not permitted to come up to the city, we had but one case of yellow fever in that city, and that was the case of a man, whom the captain of his vessel had reported to the health officer had come with him from New York, when the sick man had actually been taken as a passenger at Nassau, where the yellow fever was raging. The captain went to jail for three months, and paid a fine of five hundred dollars.

We immediately took possession of the square where this man was sick, had everything thoroughly cleansed about the square, acclimated persons took charge of him and they were not allowed to come out at all until they were thoroughly cleansed. On the sixth day he died, and we took such care of his remains that the disease did not spread at all.

Nor was the absence of yellow fever the only result of this cleanliness. All diseases became very much reduced in prevalence, so that although in and around New Orleans we had a very considerable force of troops, yet with all these unacclimated men, and

about one hundred and sixty thousand, as near as can be remembered, of population of New Orleans, the General commanding was enabled on the first of October, 1862, to report to the State Department that the city of New Orleans had a less bill of mortality than any city in the United States, north or south.

He, however, guarded New Orleans as well as possible against this and all other epidemics in other years, and it is believed the city has been substantially free from epidemic and malarious diseases since, although she is not by any manner too clean.

This preventive was made by cutting through the forest and chapparal up at the bend of the river from its bank over to Lake Pontchartrain, in making an avenue there some eighty rods wide, so that the air which blows up the river in the summer, daily, beginning about nine o'clock at night from the gulf, could have free passage across the lake, which, being a shallow body of water, would probably allow the air to move through this opening because of evaporation. In return the "norther" would sweep down the river by the city, and change the air because of its movement.

The General and his Medical Staff,—for a most competent medical officer, Dr. McCormick, sent to him by the first of July,—received perhaps too much credit for the result which was attained in the treatment of the yellow fever, or rather in its prevention in New Orleans.

After this, however, the General had a much more satisfactory experience with the yellow fever in Virginia and North Carolina in the campaign of 1864:

The city of Norfolk is situated about thirteen miles from Fortress Monroe on the Elizabeth River in Virginia. Whenever, before, the yellow fever has struck the Atlantic coast, it has by way of apparent preference paid Norfolk a visit. The most remarkable of those visits was in 1857, and will be remembered as having been very destructive of life. The North was called upon, as she ought to have been, for immense sums of money to save the city from that fell destroyer.

The General went over from Fortress Monroe to inspect Norfolk in the winter and spring of '63-'64 several times, and about the first of March active operations were begun to clean the city. Norfolk had been in armed occupation by the Confederates and by the United States since the spring of 1861. Without saying whose fault it was or intending to blame anybody for the condi-

tion of things the General found there, it may be said, that the city was simply enormously nasty, uncared for, and full of everything that would engender disease.

There were two hundred and fifty men whom the General had found on his hands when he took the command, under sentence to hard labor by courts martial ; besides he had men that were all the time deserving that sort of promotion, because it is not to be disguised that we nearly emptied our prisons into the army, and to punish offences became an enormous duty devolving upon those who had command.

That body of men was taken and with them that transportation for which there was then no use; and for many weeks there was taken out from that small city, say, not then exceeding fifteen thousand inhabitants, an average of three thousand loads of every conceivable sort of filth a week. The city was cleaned thoroughly and after the fashion I have described in New Orleans. A portion of her streets were paved and care was taken that there should be nothing that partook of decaying animal matter left in the city.

The result was that Norfolk had not a case of yellow fever in it, nor, so far as has been generally known, has she had one since that was not brought there.

This result is rendered still more remarkable because no effective quarantine could be had at Norfolk, especially because a regular communication by steamer was had all through the hot weather of 1864, via the Dismal Swamp Canal and the Sounds, with North Carolina, and especially the city of Newbern. Supplies were sent down from Norfolk to Newbern, men went back and forth continually, and, as that communication was for military purposes, it could not be interrupted.

Newbern was then a little town of about four thousand inhabitants on the Neuse River, on a sandy pine barren soil, with no considerable vigorous vegetable growth around except along the river. The General visited it in the course of inspection in January, and saw there, then, nothing which would lead any one to suspect that city ever had or ever would have yellow fever, and therefore the General took no precaution against that disease. But in the summer yellow fever broke out in the most virulent form, and a very large portion of the inhabitants, both black and white, died of it. It was very virulent. A good many of the

troops, for we occupied it, had the fever, and his remembrance is that nearly five out of ten of all the people and soldiers either left or were stricken with the disease. Still, a continual communication had to be kept up between Newbern and Norfolk, but the disease finding no atmosphere prepared for it at Norfolk never went there, although only a little more than a hundred miles away.

The General was curious to ascertain what caused the disease at Newbern, and went there as soon as the active duties of the campaign were over. The town had been in the occupation of both armies; the Confederates had besieged it, and we had besieged it, and both armies had occupied the outskirts, and the sinks of the two armies, open trenches filled with human excrement, had not been properly covered, but had been left entirely uncared for when the troops moved off, and the smell of the ordure and filth on a fine autumnal day was perfectly perceptible at the distance of two miles, making an atmosphere in which, if the yellow fever could be engendered from such a cause, it would be likely to be produced; and although inquiry as to that was made, he never heard of its been brought there.

The General directed those sinks to be built up, and he believes there has been no yellow fever in Newbern since.

I have been informed of another instance still more striking, and if my information is incorrect those people who are applying for a reward of a hundred thousand dollars from Congress to discover remedies for the yellow fever, may do well to investigate the case. I learned that on the Bayou La Fuorche, near the crossing of the Texas & Opelousas Railroad, some ten years ago, as near as I can remember, there was a sudden and very virulent breaking out of yellow fever. There was nothing of the kind there in 1862, although the yellow fever was at Galveston and other points of not distant neighborhood. Rendered curious by the fact, I wrote to a gentleman and asked some questions about the conditions and circumstances surrounding the place. I knew there was vegetable matter enough there to do the mischief, but I could not see where the necessary amount of decaying animal matter could come from in that little village. He wrote me, however, that there had been an accident on the railroad to a Texas cattle train by which some large number of cattle were killed and wounded. Those owning them simply stripped off their

hides and tumbled their carcasses into the bayou, where they lay festering and putrifying under the summer sun, and the inhabitants partook of the atmosphere in which were mixed the germs of disease supplied to it by the decaying animal and vegetable matter, and thereupon came upon them this very virulent attack of epidemic yellow fever which I have reason to believe was never there before. Certainly I never heard of it.

I hope one result of this article will be to bring out the facts of this case. Indeed, I have been tempted to write it hurriedly amid very pressing professional vocation, at this time because I desire that while public attention is called to this very terrible disease—which has one of its worst features in the fact that a man hardly knows that he has it, or that it is making any inroads upon his system, so insidious and deceitful is it, and therefore is only actually convinced of it by the belching forth of the horrible “black vomit”—it should be directed so that sanitary measures for cleanliness may be had at once, as sure prevention *wherever it can come*.
DO NOT WAIT.

BENJ. F. BUTLER.